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TECHNIQUE FOR ESTIMATING RAINFALL FROM A METEOROLOGICAL RADAR WITH POLARISATION DIVERSITY

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Process for estimating a precipitation rate by means of a bipolar radar, characterized by the following various steps: the differential phase $[\Phi]_{dp}$ and the attenuated reflectivity Z according to at least one of the polarizations H or V are measured by means of said bipolar radar, over a given interval $[r_1, r_0]$ of path radius r with respect to said radar; an estimate of the value $K(r_0)$ of the attenuation at r_0 is determined from the attenuated reflectivity profile thus measured, as well as from the difference in the differential phase between r_0 and r_1 ; an estimate $K(r)$ of the specific attenuation at r as a function of the attenuation $K(r_0)$ thus determined and of the attenuated reflectivity profile $Z(r)$ is determined; the rate of precipitation $R(r)$ is determined knowing $K(r)$.

